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CLINICAL PSYCHOLOGY

Prepared by Edgar A. Doll

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NOW the most important object of all educational schemes is to catch these exceptional people and turn them to account for the good of society. No man can say where they will crop up; like their opposites, the fools and the knaves, they appear sometimes in the palace and sometimes in the hovel; but the great thing to be aimed at, I was about to say, the most important end of all social arrangements, is to keep these glorious sports of Nature from being either corrupted by luxury or starved by poverty, and to put them into the position in which they can do the work for which they are especially fitted.

—*Huxley*

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Educational Research Bulletin

Special Education and the Gifted Child

HENRY H. GODDARD
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Henry Fairfield Osborn says: "The true spirit of American democracy that all men are born with equal rights and duties, has been confused with the political sophistry that all men are born with equal character and ability to govern themselves and others, and with the educational sophistry that education and environment will offset the handicap of heredity." But we are at the dawn of a new era in education. We are witnessing the passing of the time-worn tradition of the equality of men in the intellectual sense. The lockstep in education has been definitely broken. It is no longer necessary to waste time proving to any intelligent educator that there are dull children who cannot learn in the regular grades and who need special methods of teaching. The special class for the defectives and the dull is a recognized necessity. It is not always provided where it should be, far from it, but no thoughtful educator any longer denies the desirability of such a class.

The army test has shown us what to expect in any school system. Ten per-cent of the children will cease their mental growth with a mentality of ten years or less. Another fifteen percent will stop at eleven years, twenty percent will stop at twelve, and twenty-five percent more will not get beyond the fourteenth year in intelligence. In other words, seventy percent of the school population will drop by the way before they get to high school. Of the remaining thirty percent who will have the intelligence to take up high-school work, approximately half will reach their limit in high school, while the remainder have sufficient ability to do college work, two-thirds of them showing a mentality of sixteen and seventeen years, and the last five percent will develop a mentality of from eighteen or nineteen years. These last are the gifted children.

When one looks at this distribution of intelligence and discovers that the lower end of it contains our dull and defective children for whom much is already being done, he naturally turns to the other end of the scale which contains the brilliant children and immediately asks the question, why is not something done for these? To this we can now reply that something is being done. The special class for the gifted child has not only been suggested, but is in actual operation. The movement is for the most part highly approved, though some few objections have been voiced. These, however, are easily answered. Such, for example, as the objection that placing these bright children in a special class will have the effect of making them conceited, self-conscious, or intolerable little prigs. But surely a single child in the regular grade where he is superior to all the rest is more likely

to develop conceit than when he is one of a group of twenty or more, all of whom are as bright as he.

Other objectors think that it is good for the regular class to keep these bright children in them because they serve as pace-makers, good examples, and stimulate the duller ones. Experience proves the opposite to be true, for the dull children are discouraged by these bright ones. If a prize is offered the children feel that it is of no use to compete, for they know beforehand that the bright ones will win. Even in recitation the slower children are more often afraid of these bright children than encouraged by them. One teacher naively said after two bright boys had been removed from her class, that she found she had to explain the lesson more carefully. Evidently she had been gauging the ability of the class by the two bright members, necessarily to the disadvantage of the rest.

Others, somewhat in contrast to the first group, think that the bright boy in the regular grade is developing leadership, whereas in the gifted class of twenty pupils there will be only one leader instead of twenty as before. This confuses the term leader. There are many other kinds of leaders besides leaders of men. All these may be developed in the special class. Moreover, in the regular class the bright boy is by no means always a leader.

Even if all these objections were valid they would not begin to outweigh the positive value of the special class, as has already been demonstrated.

Approximately 40 cities in the United States have one or more of these gifted classes, the school boards have been forced to it by the inevitable logic of the situation. In spite of our traditions of equality, we have long recognized that in every grade we have the dull, the average, and the bright. Moreover, we have realized that in spite of ourselves we had to conduct the regular class for the *average* child, allowing the dull child to drag along getting little or nothing, while the bright child did not have enough to do.

Once the concept of differences in intellectual endowment was definitely accepted the necessity of adapting our methods and our instruction to the different intellectual levels was forced upon us. We now recognize that we must not waste the abilities of the bright children by compelling them to continue to drill after they have thoroughly mastered the technique, or to allow them to spend half their time in idleness because their brilliancy has enabled them to do a day's assignment in half the usual time.

The principle is clear, but the procedure is still in doubt. We have begun to segregate these brilliant children into special classes and our next problem is what to do with them. It is not our purpose here to answer this question, but rather to suggest what seems to be the general direction in which the answer will probably be found.

First of all, it should be constantly borne in mind that we have here a new problem, a new type of mind that learns in a new way. Perhaps I should better say that it is new to us in education. In other words, while we have always had brilliant children in our schools, we have never recognized them as such, and have not made a special study of them or of the methods of teaching them. So after all, for practical purposes, the problem is a new one.

The next important thing to remember is that we must not attempt to solve a new problem by old methods. We must remember that our present practice in education is the result of trial and error with the average child. And the more surely we have worked out wise and accurate methods for the average child, the more certain we may be that they are not adapted to the gifted child.

The average child requires a certain kind of explanation, a certain amount of drill, a certain amount of help. The gifted child needs almost no explanation, almost no drill, and almost no help. He has *insight*, *originality*, and the *desire to do things for himself*. Or, if not as gifted as that, he nevertheless requires his help in a different place than does the average child. Now, if this be true, it is obvious that a class of gifted children will in no way fit into our regular educational system. They should be in a different kind of building, with a different kind of teacher, different kinds of apparatus, different kind of books, and sometimes with a different kind of superintendent. This cannot all be had, but nevertheless it can be kept before us as an ideal.

We are already discussing methods for these children and are practically agreed upon one thing, namely, that we do not want to rush them through the grades, because to do so puts them out of balance. We cannot accelerate their physiological growth or their social adaptation, and to rush them through on the intellectual side is to produce a maladjustment, the consequences of which we cannot entirely foresee. An exception to this may readily be made in the early grades, for as already stated, there is no necessity for keeping a child drilling upon the alphabet or the multiplication table after he has mastered it. In other words, we may expect to find that these children master the tools of education in a very short time, and so may proceed rapidly to the use of those tools. Consequently, these children may be promoted from the first- to third- or fourth-grade work as rapidly as they acquire mastery of the mechanics. But from that time on their work should be what is commonly called enrichment of the course rather than an acceleration.

It is not necessary to discuss here the curriculum for these classes, but it may be of interest to note some of the things that are being done in addition to carrying the work usually covered in the grades. A foreign language such as French may be carried by even the youngest children. They enjoy it and do excellent work in it. In one city, typewriters are supplied to these classes. They are a wonderful success. Spelling, punctuation, capitalization are most easily learned, and incidentally and almost without knowing it, these children are learning to become excellent typists by the touch method. Nature study can be developed, art work can be carried on, and manual training is enjoyed by many, as are also extended reading and study of history. Undoubtedly much elementary science will prove of value.

Some day it may become necessary to work out a grade system for brilliant children just as we have done for the "average" child, but at the present time it does not look as though that would be a desirable procedure. We are tending toward individual education with the utmost freedom, allowing each child to follow, to a large degree, his own bent and ability. It would seem that the gifted child was the proper person with whom to try out this plan, since he has what even the average child does not possess, namely, a foresight and an ability to appreciate a goal once it is set before him.

This leads to what is perhaps the crux of the whole matter in the education of gifted children, namely, the teacher. The teacher of the gifted class must be a person who is free from all traditions, who has a broad view of education and who does not think of it as taking the child by the hand and leading him step by step over a specified and marked course, but rather one who sees a goal ahead, who points it out to the child as desirable of attainment and then says in effect: now if you wish to reach that point, I will help you when you need help. The one lesson already learned

from the classes so far formed, is the immense amount that these children accomplish when they are allowed to go alone. There is no problem of laziness or idleness in these classes, except, when the classes are started late, that is, from the higher grades, and the children have learned to be lazy there because they did not have enough to do. They soon overcome that when once in the special class. There is no problem of discipline, partly because we have surrounded them with pleasant and comfortable places to work, partly because we are allowing them to do the things that they are interested in, and, within large limits, to work in the way that they prefer, and partly because their higher intelligence permits them to see the reasonableness of the necessary regulations.

Here, more than anywhere else in the system, a teacher is needed who is a *general* and not a taskmaster one who understands the plan of the campaign with the objectives to be reached, and who cares nothing for method in the usual acceptation of that term. A teacher who is able and willing to stand by and watch progress, to give help when it is asked for. A teacher who is content to let each child go his own way as long as he is not deviating too far from the most profitable road to the goal, quick to recognize when the pupil is deviating, and tactful in bringing him back to the better method. Results so far obtained prove that these ideals are fairly easy to attain in the grades, but when we come to the high school, or the junior high school in those systems that have this institution, we find new problems requiring a good deal of tact and judgment. It is probably unreasonable to expect that children who have been going their own individual ways and their own individual rates toward the goal, should suddenly be brought back to a time schedule and a routine procedure such as we have been trying to free them from throughout all the years of the grades.

This forces us to answer the questions: What is our ideal? Do we want conformity, or do we want individuality? Do we want to develop these brilliant minds in the direction of their own talents and capacities, or do we want to try to make them conform to our preconceived notions of character, efficiency, or education? These are hard questions to answer in practice, if not in theory. We say we want them to develop individuality, but in the next breath we find ourselves insisting upon certain conventions which seem to us absolutely essential to character. But are we right? We cannot have both. Often our conventions are mere whims and are, therefore, unimportant. The problem should be faced squarely. The development of special talents, abilities, and individuality is certainly the great ideal. This ideal cannot be too strongly urged, because the inevitable tendency is merely to group these children into a special class and then proceed along the old lines. Unfortunately this is already being done in some places. It speaks volumes, however, for the value of special classes when even mere segregation brings results that satisfy many people. But we want the best results that can be obtained, and the best results are not to be obtained so simply.

While we do not know what intelligence is or what are the qualities that constitute the gifts that these children possess, we do know some of the characteristics. For one thing they *see farther ahead* than the average child. They have a quicker appreciation of values, they can hold to a purpose longer and more persistently. Some will be inclined to contradict that. Indeed one of the frequent comments is that they are lacking in this very quality, but this is an illusion. It is good evidence of our fixed habit of seeing the child from our own standpoint only.

The gifted child has exceptional persistence and perseverance in doing *his own* work—not so much in doing *our* work. The *dull* child is a slave dragging along at whatever we set him to do, because he has no goal of his own. The *average* child easily subordinates whatever originality he has to the wishes of those he respects highly. The *bright* child sees his own plan so clearly, has so many ideas of his own, that he cannot stick to anything that does not fit into his own plan. Inasmuch as these are the things that we adults set him to do, they are the ones we notice, hence we are apt to conclude that he does not stick to anything. Yet we may, in the same breath, say that he is obstinate—in other words that he is very persistent in sticking to his own ideas.

This brings up another point that needs discussion. Many people fear that the child who is not made to do things that he does not want to do is not developing moral stamina. It seems difficult to make some people see the fallacy in that position. And yet it is perfectly simple. It is not what a child does merely because an adult commands it, but what he does because *he makes himself do it* that develops his character. This is obvious if one looks about him and sees the drudgery a boy puts himself through in order to attain what is to him a desirable end. The teacher's task is to present the objective in a way that appeals.

Now the net result of all these qualities possessed by the bright child is that he loves to follow out his own plans and he frequently does not want to do the tasks that we adults set for him. But our tasks must be done, we say. No, not always. We do not always know rightly what ought to be done. But, omitting those, we admit that there are some things that ought to be done—must be done—multiplication tables for one. Shall we not compel him to learn it and punish him if he does not learn it? No. There is a better way even with average children. I am sure there is with gifted children.

This is typical of the point of view we must get if we are to do the best for these gifted children. Show the child a *reason* why he should learn the multiplication table—a reason that appeals to him—and the table will be learned in short order. So with everything else in the child's development. It must be the teacher's great work to find the reason, to set the goal, and to make it attractive enough to accomplish the result. Failing to discover a reason that appeals to the child the subject must be dropped *until something happens to turn the child's interest in that direction.* It may be necessary to wait weeks and months, even years, but it will come. And when it comes, the lost time will be more than made up. Dr. Woods Hutchinson has estimated that at the age of fourteen, the usual age of finishing the eight grades, a boy could master all the work of the eight grades in eighty hours. In other words, if we could keep a normal boy profitably occupied at something else for those eight years, he could at the end of that period, master all the school work in four weeks work of five days a week, four hours a day.

Nor is this merely theory. Many a person who has been deprived of school until that age or later has done approximately that very thing. Not long ago a ten-year-old boy was brought to the writer for examination because he would not learn his reading, writing, and arithmetic. His parents were advised to put him on a farm for a year and let him do whatever he liked. He soon became interested in rocks and minerals, and under wise suggestion this was extended to an interest in geology. Then he wanted to read so he could pursue his interest in that line. Today he is doing eighth-grade work.

The regular routine of school grades is good for those who fit into it; but there

is no reason to worry about any boy of normal intelligence, because he does not fit into the scheme. And the brighter he is the less likely he is to fit into a scheme that has been evolved to fit the average child.

All this emphasizes the fact that in the case of the gifted child we have a new problem that cannot be solved by old methods. The teacher of the special class for gifted children is no longer a teacher in the old sense. She is a guide who says: Where do you want to go? What do you want to do? All right, I will help you whenever you need help. There is no curriculum, there are no promotions, and there are no grades, but there is healthy happy work until the goal is reached. When the goal is reached the child has not only an education, but character, because he has achieved it himself. He has wasted no time. He has learned no bad habits, because all his time and thoughts have been fully occupied in useful, purposeful activity.

The interest of these children is so great and at the same time there is so much freedom in the way they carry on their work that the usual hours, with recesses or intermissions, become unnecessary. To a large degree they regulate their own times and work—a habit of inestimable value. There are no commands by the teacher, no punishments, no disorder, no repression, no strain, no worries. Just a happy, pleasurable activity, a normal life, real practice in living just as they will live when they grow up. Thus is justified Dr. Brooks' definition, "Education is life."

By this method the pupil has gained from two to six times as much useful information—his working capital of the future—as even he would have had under the old system. He has *saved* half his time; that would have doubled his attainments, but more important than that he has taken his knowledge *as he was ready for it* and could use it. There was no waste.

This is another psychological fact that we have never been able to get across to the average teacher; that it is an absolute waste of time and energy and a ruination of disposition to try to teach a child something for which he is not ready, in which he has no interest. The old Herbartian doctrine of interest was right in principle. The error in it was due to the fact that Herbart and his followers did not know the growing child and they thought that by a few minutes "preparation" the teacher could "prepare" the child to receive almost anything that the teacher had in mind, and also that this could be done as easily for one child as for another. Special education is founded on the demonstrated fact that children of the same age and even of the same mental level, may be, because of environment or heredity, in such a state of mental development that, while the one is ready for the new idea, the other will not be ready for perhaps a year, and cannot be made ready by any artificial device. He must develop to it.

The education of the gifted child is a special problem and cannot be solved by old methods. The feeble-minded child can be driven; the average child can be led; the gifted child can only be guided, or in the language of Lloyd C. Douglas, "dared" or "challenged." In this connection it is worth while to quote a few lines from Dr. Douglas' Commencement address at Ohio State University, class of 1924. He said:

> Humanity may be roughly classified into three general types—the driven, the led, and the dared. By far the largest group, numerically, must be driven to action. It is a huge, noisy, polyglot, miscellaneous aggregation of human beings who trudge along, at their best when being told what to do by their betters, but always in a more or less rebellious state of mind toward a civilization to which they have contributed more perplexity than progress. The second group, not nearly so strong numerically, but thrice as strong, every other way considered, can be led. It may be supposed that the real hope of civilization rests at last upon their ability and willingness to transmit to the mass by precept and example, the high benefits taught them by their natural leaders.

This class does not respond to coercion, and grave mistakes are being made today in the well-meant but futile attempts of parochial and provincial groups to stampede them into action. For it is as great a blunder to drive the man who responds only to considerate and courteous leadership as to coax and plead with the type that reacts only to firm discipline. Now there is a third class, so small in numbers it hardly seems to count at all in the census, but so highly potential that, dynamically, it towers head and shoulders above the others, and this class reacts only to inspiration. It cannot be driven. Nor for very long or very far can it be led. It is the little handful of eager, passionate, kinetic, creative imaginations, who respond only to challenge.

There is our problem. The class for gifted children is this "Little handful of eager, passionate, kinetic creative imaginations who respond only to challenge"—the challenge of a goal to be attained, the challenge of a problem, a task, but the problem must be theirs, not the teacher's. This is hard for the teacher, because most of us have been trained *to drive* and *to lead* rather than *to challenge*. This has been the largest part of our work. We have not known this type of child. They have been lost in the crowd. That is why it is so hard to find a teacher who can adapt herself to this problem. That is why it is so hard to find an educator who is willing to trust these children to go alone, who is willing to give up the old routine. That is why we must insist that this is a new problem that must be solved by new methods. The *driving* method and the *leading* method must give way to the *challenging* method. Nothing that we have thought essential under the old system must be accepted under the new plan without questioning. Otherwise, we are too likely to include as essential many things that are essential not to the plan but merely to our way of thinking.

We must have some plan. We cannot just go hit or miss; allowing the child, even the gifted child, to wander according to his own undeveloped and undirected fancy. What is to be the plan of this new system of education for the gifted child? The plan is both general and special. It includes two great final objectives; a high order of efficient citizen, and the complete development of the individual's special talents, but these goals have little or no influence upon the child and should not be used as an incentive. They are too far removed for his child intelligence to comprehend. In a general way he wants to be a "big man," but beyond that he does not sense the ultimate goal. His incentives must be within his reach. For that purpose the teacher must be wise and must know the steps, but she must not mistake means for ends. There will be temporary goals, different for different children. Moreover, the child's conscious goal, during the younger years, will not be the teacher's, but that does not matter if only the child is making the proper development. The child at play is merely "having a good time," but to the adult he is getting exercise and is developing various moral and social traits. No one thinks of telling this to the young child. In the same way, as he gets older, he may often see no farther than the pleasure he gets from reading or from some other activity. As long as this fits into a possible goal all is well. Whenever he is finding his pleasure in ways that mar his development or that lead to the wrong goal the teacher must bring her wisdom to bear upon the situation and somehow present a new goal, not the remote one but a near one that nevertheless is on the right road.

It may sound difficult and it does require wisdom, but there is this consideration, the gifted child with his quick reasoning and keen imagination sees farther ahead than the duller child and consequently it is not so difficult to get him to see and appreciate the goal. The rest is easy. His own energy drives him on. The teacher does not have to carry him. In short, of all the phases or types of education, nowhere is Stanley Hall's maxim more applicable: "Keep out of nature's way."

Clinical Diagnosis of Superior Children

EDGAR A. DOLL
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Interest in the psychology and pedagogy of gifted children is of comparatively recent date.[1] In this country special classes for such children were established as early as 1900, and in Germany at a somewhat earlier date. Yoder, in 1894, called attention to the psychological significance of this problem, though to be sure Galton had been active on the question before him. Indeed, from Galton we date most of our information on the importance of talent and its detection through measurement. Terman's experimental study in 1905 marks still another milestone, while Stern in 1911 precipitated an active and widespread interest which in the past decade has been very productive. Occasional studies of individual children of marked talent, supplemented by biographies of precocious children throw additional light on this important phase of child conservation and its many implications.

As a text for the present argument, we may profitably quote the following paragraph from Stern's study. He says:

> We may state with some degree of certainty, that the supernormal are divided into two groups—the specifically and the universally supernormal. In the first group some specific phase of mentality is especially strongly developed, while the other phases need not exceed, and sometimes may even fall short of, the normal level. These specific phases make up what we recognize as conspicuous talent or endowment. To this group belong the exceptionally musical child, the artistically, the mathematically, the technically, the linguistically gifted child. In the other group the supernormality embraces the entire mentality; not, indeed, in such a way that every phase is uniformly developed, but at least in such a way that a general superiority is manifested in the most diverse types of mental activity. Those who belong to this group are the great intellects. (The more exact investigation of possible differences, crosses, and mixtures of the different forms of supernormality is another future problem for psychology).
>
> The pedagogy of the supernormal must cover all forms of supernormality; it must, to a certain extent, apply different programs to the different phases.[2]

The early experimental studies of superior children were greatly handicapped by lack of suitable examining technique. The later studies received their principal inspiration from the investigations made possible by the Binet-Simon Scale, the use of which in this country spread rapidly after 1912. Only a few outstanding investigations such as those by Terman, Whipple, C. T. Jones, Coy, and Gillingham have thrown much scientific light on the psychological and pedagogical problems of gifted children, and these studies (with the exception perhaps of that by Jones) have for the most part been group studies rather than clinical studies.

Individual cases of superiority in the literature develop few generalizations from the standpoint of clinical psychology, and are for the most part clinically incomplete. Without underestimating the significance of the several studies which have been made, one may conclude from the evidence that although these studies appear to be founded on the assumption that all superior children belong to the group which Stern has called the "universally supernormal," the criteria of selection or classification

(1) For a brief resume of the entire field with classified bibliography see Dr. Genevieve L. Coy, *The Interests, Abilities, and Achievements of a Special Class for Gifted Children*. New York, Teachers College, Columbia University, 1923. 194 pp. (Teachers College, Columbia University, Contributions to Education, No. 131).

(2) Wm. Stern, trans. by Lucy M. Day. "The Supernormal Child," *Journal of Educational Psychology*, 2:143–148 and 181–190, March and April, 1911.

employed have been based on a specifically linguistic type of intellectual measurement. That is to say, the segregation of gifted children for either study or treatment has usually been founded upon an intelligence test, either individual or group, which has been predominantly of the verbal type, heavily based on language comprehension and verbal abstractions. These methods have been founded on the theory of native general intelligence supplemented by the theory of correlation of abilities, two assumptions of excellent standing in experimental psychology. On the other hand, while correlation of abilities *is* the rule, and while the concept of general intelligence does have great practical significance, these two assumptions tend to ignore the exceptions to the rule of correlation and to overlook the problem of special abilities and of intelligence types. Thus correlation of divergent abilities has never been so high that there are no individual instances of lack of such correlation, and the entire field of mental testing has amply indicated the importance of special abilities and of probable differences in intelligence types.

These difficulties were clearly recognized by Stern in his grouping of the "specifically supernormal," although it is not clear just what Stern means by the "linguistically gifted child," who at the present time might be thought of as being a child of high intelligence of the verbal type without necessarily high correlation of other abilities. These problems of lack of correlation and types of abilities have been emphasized principally in the experimental work of Miss Gillingham, although her results have been challenged on the basis of selection of cases, a criticism which she emphatically denies and which we, from our contact with her work, are inclined to deprecate.

Whatever may be our attitude toward the above problems, it is certainly safe to say that gifted children have not yet been the object of strictly clinical investigation or experiment to any significant extent. Nothing like the elaborate methods employed for the diagnosis of feeble-mindedness, for example, have been used in the study of general talent. The hereditary, medical, and social implications have been largely let alone, if not indeed ignored.

Our present purpose is to make a plea for the clinical diagnosis of superior children as opposed to the mere classification of such children on the basis of intelligence, and particularly on the basis of verbal intelligence. By classification here we mean the rating of an individual with respect to some single measure or group of similar measures. By diagnosis we mean a differential conclusion based on a summary of numerous ratings in different traits, namely, a symptom-complex which forms not only a basis for classification, but also a basis for prediction and treatment. If the conservation of talent is as important as all authorities seem agreed that it is, then surely the diagnosis of such talent on the basis of individual study is worth while. The expense in either time or money of such clinical analysis of superiority, as opposed to its more limited detection on the basis of group surveys is obvious, but we believe that the results to be obtained and the errors to be avoided surely justify the cost.

All authorities agree that feeble-mindedness must not be diagnosed on the basis of mental tests alone, and still less on the basis of intelligence tests alone. They insist that such diagnosis should comprise a thorough study of traits and personal history, as well as the medical and social background of the individual. Feeble-mindedness, then, is looked upon as representing a number of different traits in combination, and not merely an intelligence deviation.

(*Continued on page 150*)

Ohio State University

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THE CLINICAL NUMBER

This number of the *Bulletin* has been prepared and edited by the Division of Abnormal and Clinical Psychology of Ohio State University. In making our editorial bow, we acknowledge our appreciation of this opportunity to focus attention on this field of educational research and practice. Our admiration for the *Bulletin* as a valuable medium for disseminating educational research information of a highly practical nature is equalled only by our personal and professional regard for its editors and contributors. We have enjoyed our task, and privately hope that our efforts prove sufficiently worth while to justify the editor in extending the experiment. Additional copies of this number may be had upon request.

E. A. D.

THE CLINICAL POINT OF VIEW IN EDUCATION

The individual child is the immediate problem of education and of the teacher. The development of his abilities and personality, the imparting of certain essentials of knowledge, and the correlation of these with our social and cultural ideals are our objectives. We are, however, confronted with the details of developing not only the individual child, but also of educating all children. Our singleness of interest in the individual child thus becomes complicated by the problem of mass education, in the solution of which the individuals who make up the basic educational groups are all too easily lost sight of.

Free public education is conducted in the interest of society at large rather than for the immediate benefit of the individual himself. Only on such universal grounds can we justify the use of public money for individual welfare. But the welfare of the individual is the welfare of society. The individual as the unit of one educational program must, therefore, not be disregarded, whether for reasons of public policy, material advisability, group efficiency, or individual prosperity. Individual happiness and success, while not the end, are certainly the means of raising the general social level. The development of leaders and the salvaging of dependents are additional aspects of the same argument.

This conservation of the individual school child is the principal concern of the clinical psychologist. His attention is constantly fixed upon this unit of the educational group rather than on the group as a whole. His compromise between the impossibility of individual tutoring and the hopelessness of heterogeneous mass teaching, is based on two significant premises; first, that classroom groups should be organized on the basis of approximately equal native ability, and also, that education should be differentiated with regard to individual differences in ability and needs.

These two notions give promise of resulting in some fundamental educational reforms of far-reaching significance. They not only suggest some successful solutions of the problems of individual instruction and group instruction, but they also furnish a point of departure for that continuing modification of our educational system that is made neces-

sary by the ever-changing character of the school population.

One of the most hopeful signs in education today is this endeavor to adjust the individual child to the requirements and limitations of our educational system. We earnestly hope, that the education of tomorrow will reverse this endeavor and will adjust the educational system to the capabilities and the needs of the children. Either endeavor requires an intimate understanding of child individuality in its physical, mental, and social aspects.

Progress toward the scientific study of individuality is of comparatively recent date. The growth of clinical psychology since 1910 has been almost phenomenal, but already the interest in the psychological study of individual children is overshadowed by psychological studies of groups of children. But we must not forget that however important may be the consequences that follow from the classification of children based on group similarities, we cannot afford to discontinue or limit the search for individual characteristics. Thus the problem of supervision is peculiarly a problem requiring not only an understanding of individual traits, but also of the educational history of the individual. To understand the problem of learning, either through the successes or failures of the individual child, requires not only a cross-sectional view of the child, but a longitudinal section of his personality and educational development. Bad study habits, for example, cannot be corrected without reference to their origin.

What light has clinical psychology thrown on these problems? It has indicated the importance of individual differences from the standpoint of clinical types such as gifted children, feeble-minded children, psychopathic or unstable children, delinquent children, children with manual aptitudes, children with special abilities or disabilities, and so on. It has called attention to the significance of general intelligence as the most important single factor in the educational possibilities of children. It is beginning to throw light on the significance of emotional disturbances in children as a very important factor in learning. It has supported the results of medical inspection regarding the significance of physical factors in the educational progress of children. It has made possible the development of special educational methods and curricula for the education of subnormal, delinquent, and gifted children. It has insisted upon the importance of the correlation of education with the child's ultimate place in society in terms of his individual capabilities. It has insisted upon the adaptation of education based on actualities as well as ideals. It has demanded a scientific study of the causes of school failures. It promises to significantly reduce the cost of education and to increase its efficiency.

The clinical approach to education seems, at first thought, too expensive for practical consideration. To many, moreover, it seems hopeless to attempt to adapt education to the individual needs of millions or even thousands of children. This impossibility of carrying on individual studies of all children is recognized not less clearly by clinical psychologists themselves than by educationists in general. The point at issue then is not to minimize the importance of group studies and mass education, but rather to call attention to the significance and value of the clinical point of view with respect to educational problems. This point of view has proved so helpful that the clinical psychologist in the progressive public schools of today is in much the same position as the medical inspector was fifteen years ago. And just as no progressive school system can maintain its standing without adequate medical inspection of its children, so we predict that the progressive schools of the next

decade will consider the psycho-educational clinician an indispensable member of its professional staff. It requires no educational seer to make such a prophesy. This is rather a conclusion based on the successful demonstrations which have already been made in some of our most progressive school systems.

Education will do well, then to set aside the rather general idea that clinical psychology is of help only with subnormal or problem children. Its far greater usefulness lies in its endeavor to conserve the mental health and protect the educational interests of *all* children and to contribute a distinctive point of view in educational theory and practice.

E. A. D.

CLINICAL EDUCATIONAL DIAGNOSIS

Much light has been thrown on some of the problems of scholastic disability and classroom maladjustment by clinical psychological studies of retarded or disturbed school children. Is it too much to hope that the clinical method so successfully employed in individual psychology as applied to education might well be applied more universally in the field of individual pedagogy itself? Clinical teaching or diagnostic teaching is indeed no new idea. Professor Witmer, at Pennsylvania, has long since demonstrated the possibilities in this field. The more recent work of the Presseys in the experimental study of causes of educational difficulties throws additional light on the situation.

Supervision in education also shows a distinct trend toward more systematic efforts to analyze the causes of poor learning in individual children. The rather general practice of giving the failing child more of the same drill without endeavoring to determine the causes of his failure cannot much longer hold a place in modern education.

There is as distinct an opportunity for clinical pedagogy in education as there is for clinical psychology. The clinical psychologist is all too often unfamiliar with the intimate problems of school learning, and is all too often inadequately informed in the detailed factors involved in school progress. Bad study habits, low interest, inadequate home support, poor teaching, unfortunate emotional attitudes, and the like, are distinctly the field of a clinical educationist.

We know also, that a large amount of school failure is caused by inadequate or improper classroom management. The individual may be lost in the group and need to be rediscovered. By no means all scholastic defectives are mental defectives, yet many become so classified for lack of clinical educational differentiation. Some children cannot learn under mass instruction, or learn but badly. These must be sought out in a program designed to conserve as well as develop the native intellectual endowments of all school children.

This suggests a host of research problems in the field of education centered round the problems of learning in the individual child, problems which departments or bureaus of educational research cannot much longer ignore. The consequences of clinical educational studies while perhaps not so spectacular as those of group measurements of achievement or intelligence may be equally significant. Overcoming individual school failure is an important educational task and the lessons learned in restoration classes and coaching classes may well be carried over to the improvement of instruction in the ordinary classroom.

The clinical educationist has not yet appeared on the pedagogical stage in this title role or under the spotlight. But his cue has been sounded. Prompting should be unnecessary. His "part" is obvious. His applause will not be lacking.

E. A. D.

A Clinical Case Study

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The following case is presented for the purpose of illustrating the methods and the significance of comprehensive case study. This boy, who might easily have been diagnosed as a simple case of feeble-mindedness on the basis of his school history and intelligence retardation, appears as a result of more complete clinical study to possess certain capabilities which compensate in some measure for his disabilities. We must not, however, overlook the significance of special deficiency, even though special proficiency may operate as a substitute.

Circumstances.—A little colored boy, Otto A., was brought to the Clinic because it was said that he was incapable of performing or learning to perform the ordinary school work. His life age was 8.5 years. He was in the second grade, but had not been successful in learning to read or to write. It was said that he could not even learn the letters of the alphabet, although his school attendance was regular and he appeared to be industrious and eager to learn. The question was raised as to whether or not he should be taken out of the regular school work and enrolled in the special class, the mother stating incidentally that the boy was especially interested in all sorts of mechanical devices. The school principal suspected the boy of being feeble-minded.

Initial observations.—At first sight, the boy did not appear to be mentally defective. On the contrary, he seemed unusually alert, active, and interested for a colored boy of his age. Free conversation with him showed a range of activities and interest and a degree of self-dependence which warned the examiner against the likelihood of feeble-mindedness.

Family history.—A detailed inquiry into the family history gave information of negative significance. This boy had two brothers aged five and seven, who were both said to be mentally normal in all respects. There was a report of a stillbirth two years before this child was born. Both parents were gainfully employed, the father as a laborer and mother as a maid. The father was said to be a steady worker who had entered high school, but had not graduated. The mother had reached the fifth grade. The mother appeared to be a capable woman distinctly interested in the welfare of her family. She gave the impression of a general family status somewhat above the average for her race. No other hereditary facts could be obtained which threw much light on the case.

Personal history.—The personal history was also negative except for school record. Birth was said to be normal and no abnormal circumstances either before or after birth were obtainable. In his development, Otto had been slow in learning to talk, read, and count. His conduct has always been satisfactory. His attendance at school has been regular, but he has not been able to succeed in his school work beyond the first grade.

Home conditions.—The family were reported as living in a crowded neighborhood in Columbus, in a five-room house. No lack of environmental opportunity which might account for disability was obtainable.

Medical history.—As a baby, Otto was bottle-fed. A children's agency

reports that three Wasserman tests were positive and that Otto was receiving anti-syphilitic treatment at the time of the examination. The mother stated that he had suffered a "poison infection" from a rat bite which resulted in a pus formation "under the jaw," which was relieved by lancing.

Personal traits.—The boy is reported as playing with children older rather than younger than himself. He is said to be obedient and affectionate toward his parents and siblings. It was said that he was especially interested in mechanical things and that he spent much time building imitation radio sets and other things out of waste wire. Additional personal traits became more clear under direct examination.

Psychological tests.—On the Stanford Binet test Otto obtained a mental age of 5.7 years, or an I. Q. of 67. He passed all the tests of Years III and IV. In Year V he barely missed the comparison of weights, and failed completely in naming the colors. Of the tests for Year VI he failed on counting thirteen pennies (counting only to 11), verbal comprehension, and repeating the sixteen-syllable sentence. At Year VII he failed to give the action on the pictures, failed on the verbal differences, and barely failed copying the diamond. He failed all the tests of Year VIII. His mental age, his intelligence quotient, the distribution of tests passed in the examination, the general quality of his reactions, all pointed to a diagnosis of feeble-mindedness. That such a diagnosis was unsafe, if not indeed incorrect, was evident from the additional tests employed and his history as a whole. It is worth noting that his retardation in these tests was greatest on tests of verbal abstraction.

On the Porteus Maze Test he obtained a mental age of 10.5 years, or an I. Q. of 140. His success on this test was in striking contrast with the failure on the Binet. This test has been described as an intelligence test, measuring social aptitude involving such factors as foresight, prudence, and caution, and as a test which correlates highly with industrial aptitude rather than scholastic aptitude. It is a test, moreover, on which the feeble-minded are specifically incapable. It was, therefore, evident that his performance on this test threw serious doubt upon a diagnosis of mental deficiency.

On the Goddard Form Board Test his best speed was average for seven years. On the Healy Pictorial Completion Test A his performance was average for six or seven years, with four illogical errors. On the Manikin Test his score was average for above seven years. On the Feature Profile his score was under seven years. On the Knox Cube Test his score was average for eight years. These various performance tests agree well among themselves and indicate an average retardation of about one year, or an I. Q. of about 90. He would rate as dull normal, rather than either feeble-minded or superior. These tests are generally rated as tests of non-language intelligence rather than as tests of mechanical skill.

In the Stenquist Mechanical Assembly Test, Series I, he obtained a score of 33 points, which is average for twelve years. This test is supposed to rate mechanical ability and shows Otto about 50 percent advanced for his age, or an I. Q. of 150. The contrast between the high score on this special test of mechanical skill and the relatively low scores on non-verbal tests suggested that the mechanical skill was specific and was not correlated with a correspondingly high non-verbal intelligence.

It should be stated that rough tests of hearing showed no marked defect for practical purposes. Rough tests of vision indicated a possibly subnormal visual acuity which did not, however, seem to interfere with this examination. This visual defect may be a factor in

his inability to learn to read or in his language handicap.

Attitude.—Throughout the examination, Paul was very cooperative and persistent in his efforts as long as success seemed likely. He reacted more favorably toward the concrete tests and showed marked spontaneity in all tests of mechanical aptitude.

General résumé.—A review of all the material developed in this case, indicates the following positive facts: (1) history of syphilitic and toxic infection, (2) history of school failure coupled with retardation in language development, (3) marked inferiority in verbal intelligence, (4) slight inferiority in non-verbal intelligence, (5) marked superiority in social or industrial aptitude, and (6) marked superiority in mechanical skill.

The negative data show: (1) no significant hereditary background discovered, (2) no specific developmental defects, (3) no environmental deficiencies, (4) no subjective qualitative indications of mental deficiency, and (5) no record of misconduct or social inadequacy. Incidentally, attention is called to the necessity for interpreting all these data with reference to the standards for his race.

Diagnosis.—In the light of the above history, this boy is diagnosed as a case of verbal deficiency with marked mechanical aptitude. A diagnosis of feeble-mindedness is inadmissible in the face of his generally successful social adaptation. In calling attention to his specific abilities, however, it is also important not to overlook his verbal deficiency. Special attention is called to the toxic condition. There is no evidence that this has produced a condition of instability as might perhaps have been expected.

Recommendations.—In the light of the above, it is unlikely that Otto would succeed in the ordinary classroom. In spite of the fact that he is not feeble-minded, he will have a much better educational opportunity in the special class for subnormals, where special attention is given to developing manual and industrial capabilities. In this class he should not be looked upon as feeble-minded, but as verbally deficient. If the school system provided facilities for the manual type of subnormal who is not feeble-minded, a special class of this sort would be much more advisable. Meanwhile, he should receive as much academic training as he can successfully master, but this should be offered with reference to the continuance of his mental development or the absence of it. This means that he should be re-examined at least annually for the next few years. The significance of the history of syphilitic and other toxic infection is not evident from this examination. A physician should be consulted for this aspect of the case.

In conclusion, we call attention through this case to the fact that this boy, who appears to be feeble-minded on the basis of the Binet Test and on the basis of his school record, does not appear to be feeble-minded in the light of the total case history. The case illustrates the necessity for providing other types of special classes than those for the feeble-minded alone. The fact that this child can receive some profitable training in the special class for the feeble-minded does not warrant us in concluding that he will receive his best educational opportunities there. On the contrary, this case indicates the importance of providing special educational opportunities for individuals who are socially adjusted, but scholastically handicapped. The point of view and educational ideal for such classes should be quite different from that of the ordinary special class for the feeble-minded.

Further Note on the Intelligence Quotient

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In previous contributions on the subject of the intelligence quotient, the writer has argued that:

1. The intelligence quotient is not a direct measure of intelligence, but is a ratio derived from two other measurements, namely, intelligence age divided by life age.

2. This ratio is an index of *brightness*, and not a measure of *level* of intelligence.

3. The intelligence quotient is only *approximately* constant, and only so *on the average*.

4. This approximate average constancy is a corollary of the principle of the Stanford standardization which makes average annual mental-age increments equal average annual life-age increments.

5. The intelligence quotient is significantly *variable* on the average, which is a statistical corollary of the average constancy, since the average represents only the middlemost 50 percent of cases and not the upper and lower quartiles of decrease and increase.

6. The approximate constancy or approximate variability of the intelligence quotient may be stated in terms of numerical probability. For example, if approximateness is defined as less than five points of intelligence-quotient change plus or minus, then every other child shows a significant intelligence-quotient change, every fifth child a very significant change, every twentieth an extremely significant change, and so on.

7. The significance of a given amount of intelligence-quotient change depends upon the age of the child, since periodic variation in rate of mental development is obscured by being spread over the entire period of a child's life.

8. The experimental evidence on the constancy of the intelligence quotient is inadequate because there are very few important studies of continuous re-examinations of the same children from year to year. Moreover, much of the data presented is obscure because the variables, age, mental age, and interval between examinations, have been overlooked. Also such experimental factors as completeness or incompleteness of successive examinations, personal equations of examiners, upper limits of the scale as a measure of ability, uncertainty regarding the average age of arrest of intellectual growth, and the still more obscure influences of physical and environmental factors have been largely disregarded.

9. The experimental evidence indicates that the future intelligence quotient of individual children is unpredictable except in terms of the probabilities and within the limits mentioned above.

10. There is a marked tendency for the intelligence quotient of feeble-minded children to decrease, and (apparently) of superior children to increase, these opposing tendencies being cancelled in the averages.[1]

In the present further discussion of the intelligence quotient, we wish to call attention to the incomparability of such quotients derived from intelligence tests other than the Binet-Simon Scale, and the consequent serious misuses of this device.

Practically all the experimental evidence regarding the significance of intelligence quotients is founded on investigations made with the Binet Scale, principally with the Stanford Revision of that scale. The significance of intelligence-quotient limits as indexes

(1) Doll, Edgar A. *The Growth of Intelligence*. Princeton, New Jersey, Princeton University Press, 1920. 130 pp. (Psychological Monographs, v. 29, whole no. 12).

of different degrees of ability has not been adequately established for other mental tests. We tend to forget that the principal value of the Binet Scale arose not so much from its ability to measure intelligence levels as from the experimental demonstrations of the significance of definite amounts of mental age or intelligence-quotient deviations.

The experimental conclusions based on Binet mental ages or intelligence quotients do not necessarily apply with reference to mental ages or intelligence quotients obtained with other mental tests. This fact was well recognized some years ago when psychologists expressed the various ratios of intellectual ability by distinctive terms, such as, the coefficient of mental ability for intelligence ratios obtained by the Yerkes-Bridges Point Scale, the mental index used by Pintner, the intelligence ratio used by Myers, and so on. The difficulty of this question is also evident in the use of various statistical expressions of deviation in mental ability such as the percentile method, the sigma method, the probability method (in terms of percent of overlapping), the T-score method, and similar measures.

In educational circles there is a general tendency to use the term intelligence quotient for *any* intelligence ratio obtained by dividing a child's score in *any* intelligence test by the score which is median for his life age in that test, and to indiscriminately infer from this ratio all the implications which a Binet intelligence quotient conveys. That these implications do not necessarily apply to all intelligence quotients is both psychologically and statistically apparent.[1] Different tests measure different aspects of intelligence such as type, level, or breadth.[2] Some mental tests even appear to measure other phases of individuality or mentality than that which is ordinarily called general intelligence.

We do not intend to enter into the technical aspects of this question at this time, the more so as this has been made the subject of independent, contemporaneous investigation by Dr. Gertrude Rand[3] whose treatment of this phase of the problem has been both more intensive and extensive than our own. For present purposes, a simplified statement of the statistical aspects of the question based on a comparison of the percentile significance of intelligence ratios will serve to call attention to the dangers of indiscriminate use of the intelligence quotient. Obviously, the same argument applies to all mental tests whose standardization curves are not statistically identical and whose psychological contents are dissimilar. Thus the significance of a given amount of mental-age retardation or acceleration on one test is not necessarily the same as that for another.

Let us suppose that a child has an intelligence quotient of 130 in each of three different tests, for example, in the Stanford Binet, Pressey Cross-out (Schedule E), and Pintner Non-Language. And suppose that this intelligence quotient is in each case based on the ratio of mental age 13.0 to life age 10.0. According to the published standards for these tests the child's standing would be 99 percentile for the Binet, 90 for the Pressey, and 75 for the Pintner; namely, he would rank 99 on the scale of 100 in Binet, 90 in Pressey, and 75 in Pintner. Or suppose that in each of these tests the mental age was 10 and the life age 13. The intelligence quotient in each case would then be 77. The child would then rank 4-percentile on Binet, 10 on Pressey, and 30 on Pintner. Or sup-

(1) Freeman, Frank N. "The Interpretation and Application of the I. Q." *Journal of Educational Psychology* 12:3–13, January, 1921.

(2) Thorndike, E. L. "The Improvement of Mental Measurements," *Journal of Educational Research*, 11:1–11, January, 1925.
Thorndike, E. L. "Intelligence and Its Uses," *Harpers Magazine*, 140:227 ff, December, 1920.

(3) "A Discussion of the Quotient Method of Specifying Test Results," read before American Psychological Association, December 31, 1924. Not yet published. For advance abstract cf. Program American Psychological Association, December, 1924, p. 61.

pose that the percentile standing is the same on each test, say 75-percentile, which is the upper limit of the average range. Then the Binet intelligence quotient would be 108; the Pressey, 115; and the Pintner, 130.

These illustrations show the inequalities of intelligence quotients in different tests. Similar results may be obtained from standardization data of other tests. Obviously the quantitative significance of an intelligence quotient depends then on the test employed and will continue to do so until intelligence quotients are rendered comparable on a common basis of statistical deviation.

And finally we wish to emphasize again the importance of distinguishing between level and brightness of intelligence, that is between the absolute and the relative measures of intelligence, or between mental age and intelligence quotient. An I.Q. of 100 may mean an M. A. of 5, 10, or 15 years, depending on the child's age at the time. Numerous experiments have been reported where a high intelligence quotient with a low mental age has been confused with low intelligence quotient and high mental age, because of failure to recognize this point. Intelligence quotients do not have the same functional meaning when derived from different age levels. And as long as the upper limit of average mental development is undecided or not agreed upon, still more confusion is introduced.[1]

The only safe procedure until these questions are more definitely settled is to state on what test an intelligence quotient is based and to state also the life age and mental age from which it is calculated. We must recognize also that a large amount of experimental work must be done on a mental test before the social or educational significance of its norms is established. To transfer the implications of Binet ratings to any test whatsoever is manifestly unsafe and unsound practice.

(1) Teagarden, Florence M. *The Upper Limits of the Development of Intelligence.* New York, Teachers College, Columbia University, 1924. 112 pp. (Teachers College, Columbia University, Contributions to Education, No. 156). Note excellent bibliography of recent contributions to these problems.

SUMMARY

1. The Binet intelligence quotient has great educational and social significence, but it has limitations which must not be ignored.

2. The significance attaching to a Binet intelligence quotient does not necessarily apply to intelligence quotients derived from other intelligence tests, since intelligence quotients from different mental tests may be statistically unequal and psychologically incomparable.

3. Reports citing intelligence quotients should specify the test, age, and mental age from which the intelligence quotients are derived.

CLINICAL DIAGNOSIS OF SUPERIOR CHILDREN

(*Continued from page 141*)

Can we afford to be any less exacting than this in our treatment of superiority? Is it too much to ask that just as we distinguish between general deficiency and special disability, so we ought to distinguish between general proficiency and special ability. Ought we not to study the total traits and personal history of gifted children and also their medical and social background, as well as merely testing their intelligence or mentality?

Although the methods of clinical psychology have been developed principally in the field of abnormal or subnormal psychology, they have more recently been applied with excellent results in the field of other forms of deviation such as delinquency and psychopathy. Methods have also been devised for the diagnosis of special talent as opposed to general talent. These method may be applied to all problems of

human deviation, whether quantitative or qualitative. There is no reason why the methods of clinical psychology should not be applied directly to the study of general talent just as it has been applied to the study of general deficiency, and surely it is not too much to expect that when so applied the results from the study of superiority may at least equal in importance the significant results obtained from the study of deficiency. Of course, the successful application of clinical methods in any human field depends upon the establishment of satisfactory differential norms. The significance of amounts of deviation in any trait as indicators of general superiority will have to be established just as painstakingly as has been done in the study of feeble-mindedness.

The methods of clinical psychology are simple enough, although perhaps their application calls for unusual or extensive preparation and skill. The clinical psychologist must be well oriented not only in psychology, but also in the various fields of medical science, sociology, and pedagogy, at least. The technique, while not difficult, is more or less detailed and demands an orientation in specific facts of individual differences not to be ignored.

An outline of adequate clinical study of superiority should include two major aspects of investigation, the historical and the examinational. The historical aspect should cover an investigation of the individual's antecedents, or life history, from the standpoint of inheritance, development, pathology, training, opportunities, and experience. The examinational study should include an immediate survey of the medical, psychological, social, and educational status of the individual. This medical examination should comprise not only a superficial observation of physical and organic abnormality, but should pay particular attention to those normal and abnormal neuro-physiological conditions which play such an important part in growth, development, and function. The psychological study should comprise not only the application of intelligence tests, but also a study of emotional characteristics, skills, attitudes, interests, and activities. The pedagogical study should include not only a measurement of educational accomplishments but also of methods of learning, habits of study, and vocational or professional capabilities. The social study should include not only present conformity to social demands, but also environmental opportunities and liabilities, moral attitudes and responsibilities, and particularly that large group of influences involved in the development of character.

The day has passed when feeble-mindedness may any longer be considered a mere intelligence deviation. The day has come when genius should no longer be considered a mere intelligence deviation. The ideal of education is to assist the individual to realize a harmonious development of his entire personality and innate capabilities, and to bring about that relationship of the individual to society which will conserve and promote human welfare. The preserving of the mental and physical health, right social attitudes, and creative powers of those who give promise of being the political, intellectual, and economic leaders of society is a matter of such universal concern that no effort should be spared in seeking its accomplishment.

To Preserve Children

Take one large, grassy field, one-half dozen children, two or three small dogs, a pinch of brook and some pebbles. Mix the children and dogs well together and put them in the field, stirring constantly. Pour the brook over the pebbles. Sprinkle the field with flowers. Spread over all a deep, blue sky, and bake in the hot sun. When brown, remove and set away to cool in a bath tub.

Exchange

RECENT BOOKS

Mervin A. Durea

BURNHAM, WILLIAM T. *The Normal Mind.* New York, D. Appleton & Co., 1924. 702 pp.

This book deals especially with the mental health of normal children. An integration of personality that makes adjustment possible is cited as the fundamental characteristic of the normal mind. Conditions and methods which tend to preserve and develop integration, and also conditions and practices which tend to disintegration are emphasized. Conditions to adjustment may be developed physically by coordinated activities, and mentally in doing purposeful tasks. Thus, mental attitudes are developed, and they together with inherited tendencies, determine behavior. Any stimulus that touches off a determining tendency is called suggestion. The function of education and the teacher are largely suggestion.

GRAVES, KATHARINE B. *The Influence of Specialized Training on Tests of General Intelligence.* New York, Teachers College, Columbia University, 1924. 70 pp. (Teachers College, Columbia University, Contributions to Education, No. 143).

The clinical psychologist must consider the social status, environmental influences, educational advantages, and so forth, and the ways in which such factors affect the mental life of the individual. The experimental investigations of Dr. Graves of the effect of special training on general intelligence is a much needed and worth-while contribution on some of these points.

HORN, JOHN L. *The Education of Exceptional Children.* New York, The Century Co., 1924. 343 pp.

The author here deals with the problem of differential education as it is related to three specific types of children, mentally exceptional—the super-typical and sub-typical; tempermentally exceptional—truants, incorrigibles, and speech defectives; and physically exceptional—blind, deaf, and crippled. Valuable experimental data are presented regarding the extent to which these various groups are being handled in the larger cities throughout the country. A theory of education and educational policy is proposed for each group.

KOFFKA, KURT. *The Growth of the Mind.* New York, Harcourt, Brace & Co., 1924. 383 pp.

This introduction to child psychology has been translated from the German by Professor Robert M. Ogden of Cornell University. The author champions a school of psychological theory and research called *Gestalt Theorie.* He believes that he can demonstrate his hypothesis in the interpretation of childhood. The book is not a compendium of facts, but rather lays stress upon the evolution of the child's mind, taking into consideration various aspects of traditional psychology.

MATEER, FLORENCE. *The Unstable Child.* New York, D. Appleton & Co., 1924. 471 pp.

Dr. Mateer deals with the problem of the psychopathic (unstable) child in his various clinical aspects. Some twelve or fifteen different types of psychopathic children are cited. Children differ not only as to *quantity* of intelligence, but also as to *quality.* It is this last aspect that gives rise to the study of the psychopathic child. Valuable suggestions are given relative to the conduct and personnel of the clinical laboratory, and as the practice of psychopathy itself or the methods in use for differentiating the psychopathic child.

THURSTONE, L. L. *The Nature of Intelligence.* New York, Harcourt, Brace & Company, 1924. 383 pp.

There is no question today in psychology which has greater significance than that of intelligence. Thurstone attempts to harmonize three schools of psychological thought, namely, new psychology, academic or scientific psychology, and objective behaviorism. In their present state they are irreconcilably disparate.

STEDMAN, LULU M. *Education of Gifted Children.* Yonkers-on-Hudson, World Book Co., 1924. 192 pp.

Special classes for deficient children have long been in existence but special classes for gifted children are of fairly recent origin. The author in this study has presented the results of actual experimental contact with gifted children. Various types of case studies of children who are not only generally gifted but who are specifically gifted are presented. Recommendations are made for enrichment of curriculum and teaching methods.

TEAGARDEN, FLORENCE M. *The Study of the Upper Limits of the Development of Intelligence.* New York, Teachers College, Columbia University, 1924. 112 pp. (Teachers College, Columbia University, Contributions to Education, No. 156).

An experimental study of a topic that is a vital issue in clinical and abnormal psychology, and also the general and educational fields. Two lines of evidence are used, namely, current literature and experimental results. The author has also worked out a very valuable bibliography.

MORGAN, JOHN J. B. *The Psychology of the Unadjusted School Child.* New York, Macmillan Co., 1924. 330 pp.

This book states that a mere classification of mental disturbances has little value outside of medical circles, and contributes little toward

understanding psychological disturbances. Many mental peculiarities are nothing but bad habits. Correction of these by replacing them with good habits is a matter of education and not of retributive punishment. Morgan uses a modified psycho-analytic mechanism in explaining various forms of school maladjustment.

IN RECENT JOURNALS

Zoe E. Leatherman

Parker, S. C. "Adapting Instruction to Differences in Capacity," *Elementary School Journal*, 25:20–30, September, 1924.

A discussion of practical provisions for differentiated teaching.

Terman, Lewis M. "The Possibilities and Limitations of Training," *Journal of Educational Research*, 10:335–43, December, 1924.

The announcement of a proposed study to determine the relative contributions of heredity and training to our educational product.

Whitley, Paul L. "The Dependence of Learning and Recall upon Prior Mental and Physical Conditions," *Journal of Experimental Psychology*, 7:420–28, December, 1924.

An attempt to test the assumption that short fluctuations in learning are due to prior physical and mental conditions. Results by groups failed to show this, though some individual cases reported were so effected.

Thorndike, E. L. "The Improvement of Mental Measurements," *Journal of Educational Research*, 11:1–11, January, 1925.

A discussion of the arbitrariness of units and the ambiguity of significance of present mental tests. The author concludes that better measures and more exact ones are needed. He differentiates intelligence in terms of level, breadth, and speed.

Lincoln, Edward A. "Scientific Method Applied to the Study of Individual Development," *School and Society*, 20:412–14, September 27, 1924.

Some preliminary results of a comprehensive study of individual development by means of physical, mental, and educational measurements.

Freeman, Frank N. "The Treatment of the Gifted Child in the Light of Scientific Evidence," *Elementary School Journal*, 24:652–61, May, 1924.

The author here points out that the real problem is not a question of acceleration and enrichment, but rather one of adjustment—adjustment which aims to save time and to give opportunity for work at a higher intellectual level.

Jones, Mary C. "The Elimination of Children's Fears," *Journal of Experimental Psychology*, 7:382–90, October, 1924.

Two possible methods of overcoming children's fears are suggested by the author.

Judd, C. H. "Psychology as a Basis of Educational Methods," *Elementary School Journal*, 25:102–12, October, 1924.

This article presents a criticism of educational psychology which is based upon individual rather than social psychology.

Plimpton, Harriett. "My Experiment with Misfit High-School Girls," *Educational Review*, 68:178–80, November, 1924.

Here is reported a scheme of remedial teaching used with a "slow progress" group in Philadelphia.

Hughes, W. Hardin. "Organized Personnel Research and Its Bearing on High-School Problems," *Journal of Educational Research*, 10:386–98, December, 1924.

The author presents applications of the ratings of pupils' capacities, attitudes, and interests and their relation to achievement and mental ability.

A NEW BIBLIOGRAPHY OF TESTS

Bibliographies are always a welcome contribution to research. When such a compendium of references is also comprehensive, complete, classified, and cross-referenced its value is greatly increased. Only the bibliographer himself knows the trials and labors involved in such an undertaking, and his efforts are all too seldom recognized as a positive research contribution. Much more than mere clerical labor or library skill are required for such endeavors.

Bulletin, 1923, No. 55, of the Bureau of Education[1] is such a research contribution, and one of unusually high merit. It successfully covers "the printed material issued in this country concerning intelligence and educational tests during the period from January 1, 1918, to June 30, 1922," a period of remarkable productivity in these fields. The titles are classified under three main

(1) Doherty, Margaret, and MacLatchy, Josephine. *Bibliography of Educational and Psychological Tests and Measurements*. Compiled under the direction of B. R. Buckingham. U. S. Bureau of Education, Washington, 1924. 233. pp. (Bulletin 1923, No. 55).

heads: (1) general references on the problems of measurement, (2) references to particular intelligence and educational tests (the latter classified by subjects), and (3) references on characteristics and uses of tests. The classifications of titles also cover such specific topics as, psychological tests other than intelligence, rating scales, score cards, statistical aspects, uses according to types of schools, and specific uses in improving school administration and instruction.

One feature of the work, Part V, is the classified list of all tests with references to the originators and publishers (with addresses of the latter). The whole work is carefully indexed.

We congratulate both the U. S. Bureau of Education and the Ohio State University Bureau of Educational Research for this important contribution made possible by their joint activities. Its publication should materially assist the spread of the measurement movement in education. *Edgar A. Doll.*

COURSES IN CLINICAL PSYCHOLOGY AND CHILD STUDY

DEPARTMENT OF PSYCHOLOGY
SUMMER QUARTER
OHIO STATE UNIVERSITY

Psychology 607. Genetic Psychology and Child Study. First term. Five credit hours. Mr. Williams.

Psychology 609. The Exceptional Child. First term. Three credit hours. Mr. Doll.

Psychology 611. The Mentally Deficient Child. Second term. Three credit hours. Mr. Doll.

Psychology 613. Mental and Educational Tests. Either term. Three credit hours. Mrs. Pressey.

Psychology 614. Problems of Test Work. First term. Three credit hours. Mr. Pressey.

Psychology 616. Binet Mental Tests. The Quarter. Two credit hours. Mr. Doll.

Psychology 617. Elementary Psychological Clinic. The Quarter. Two credit hours. Mr. Doll.

Psychology 620. Practicum in Mental Diagnosis. The Quarter. Two credit hours. Mr. Doll.

Psychology 640. Educational and Vocational Guidance. First term. Three credit hours. Mr. Toops.

Psychology 650. Minor Research Problems. The Quarter. One or more credit hours. Mr. Williams, Mr. Pressey, Mrs. Pressey, Mr. Toops, Mr. Doll.

Psychology —. Adolescence. First term. Three credit hours. Mrs. Pressey.

STUDIES IN PROGRESS

The following theses are now under investigation in the Division of Abnormal and Clinical Psychology, College of Education, Ohio State University:

MASTERS THESES

Adams, Mary, "Mental Differences between High-Grade Mental Deficients and Inferior Normals."

Bakes, Frank P., "The Diagnosis of Mental Instability."

Leob, Irma H., "The Comparative Intelligence of Jews."

Pate, Ormay, "The Comparative Intelligence of Negroes."

Pollock, Martha, "An Analysis of Personality."

Studebaker, E. B., "The Pedagogy of Sex Hygiene."

Williams, Dortha, "The Gifted Child and the Special Class."

Wyer, Pauline LeF., "The After-History of a Group of Gifted Children."

DOCTORS THESES

Durea, Mervin A., "The Mental Hygiene of College Students."

Ekdahl, A. G., "The Influence of Attitude on World-Association Reactions."

Ekdahl Naomi N., "A Study of Religious Fanaticism."

Growden, C. H., "A Study of Juvenile Incorrigibility."

Salestate, Paul, "Religious Aspects of Suggestive Therapeutics."